

## CHAPTER 1

## Series

This chapter consists of questions in which series of numbers or alphabetical letters or combinations of both are given, which are generally called the terms of the series. These terms follow a certain pattern throughout the series. The candidate is required to study the given series, identify the pattern followed in the series and either complete the given series with the most suitable alternative or find the wrong term in the series.

## 1.1

## Number series

## Solved Examples

**Directions :** Find the missing term in each of the following series.

**Ex.1** 1, 6, 15,?, 45, 66, 91

- (1) 25 (2) 26 (3) 27 (4) 28

**Sol.** Clearly, the given sequence follows the pattern :  $+ 5, + 9, + 13, + 17, + 21, + 25, \dots$

Thus,  $1 + 5 = 6, 6 + 9 = 15, \dots$

So, missing term  $= 15 + 13 = 28$ . Hence, the answer is (4).

**Ex.2** 2, 5, 9, 19, 37,?

- (1) 73 (2) 75 (3) 76 (4) 78

**Sol.** Clearly, we have:  $2 \times 2 + 1 = 5, 5 \times 2 - 1 = 9, 9 \times 2 + 1 = 19, 19 \times 2 - 1 = 37, \dots$

So, missing term  $= 37 \times 2 + 1 = 75$ .

Hence, the answer is (2).

**Ex.3** 4, 8, 28, 80, 244,?

- (1) 278 (2) 428 (3) 628 (4) 728

**Sol.** The terms of the given series are:  $3^1 + 1, 3^2 - 1, 3^3 + 1, 3^4 - 1, 3^5 + 1, \dots$

So, missing term  $= 3^6 - 1 = 729 - 1 = 728$ .

Hence, the answer is (4).

**Ex.4** 10000, 11000, 9900, 10890, 9801,?

- (1) 10241 (2) 10423 (3) 10781 (4) 10929

**Sol.** Clearly, alternately we add and subtract 10% of a term to obtain the next term of the series.

Thus,  $10000 + (10\% \text{ of } 10000) = 11000; 11000 - (10\% \text{ of } 11000) = 9900,$

$9900 + (10\% \text{ of } 9900) = 10890, 10890 - (10\% \text{ of } 10890) = 9801.$

So, missing term  $= 9801 + (10\% \text{ of } 9801) = 9801 + 980 = 10781$ . Hence, the answer is (3).

**Ex.5** 0, 6, 24, 60, 120, 210,?

- (1) 240 (2) 290 (3) 336 (4) 504

**Sol.** Clearly, the given series is :  $1^3 - 1, 2^3 - 2, 3^3 - 3, 4^3 - 4, 5^3 - 5, 6^3 - 6.$

$\therefore$  Missing term  $= 7^3 - 7 = 343 - 7 = 336$ .

Hence, the answer is (3).

**Ex.6** 1, 4, 27, 16,?, 36, 343

- (1) 25 (2) 87 (3) 120 (4) 125

**Sol.** Clearly, the given series consists of cubes of odd numbers and squares of even numbers,

i.e.  $1^3, 2^2, 3^3, 4^2, \dots$

So, missing term  $= 5^3 = 125$ . Hence, the answer is (4).

**Ex.7** 4, 6, 12, 14, 28, 30, ?

- (1) 32 (2) 60 (3) 62 (4) 64

**Sol.** The given sequence is a combination of two series:

- (I) 4, 12, 28, ? and (II) 6, 14, 30, .....

Now, the pattern followed in each of the above two series is : + 8, + 16, + 32, .....

So, missing number =  $(28 + 32) = 60$ .

Hence, the answer is (2).

**Ex.8** 1, 3, 3, 6, 7, 9, ?, 12, 21

- (1) 10 (2) 11 (3) 12 (4) 13

**Sol.** Clearly, the given sequence is a combination of two series:

- (I) 1, 3, 7, ?, 21 and (II) 3, 6, 9, 12

The pattern followed in I is + 2, + 4, ..... and the pattern followed in II is + 3.

So, missing number =  $7 + 6 = 13$ .

Hence, the answer is (4).

**Ex.9** Which fraction comes next in the sequence  $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, ?$ 

- (1)  $\frac{9}{32}$  (2)  $\frac{10}{17}$  (3)  $\frac{11}{34}$  (4)  $\frac{12}{35}$

**Sol.** Clearly, the numerators of the fractions in the given sequence form the series 1, 3, 5, 7, in which each term is obtained by adding 2 to the previous term.The denominators of the fractions form the series 2, 4, 8, 16, i.e.  $2^1, 2^2, 2^3, 2^4$ .So, the numerator of the next fraction will be  $(7 + 2)$  i.e. 9 and the denominator will be  $2^5$  i.e. 32.Thus, the next term is  $\frac{9}{32}$ . Hence, the answer is (1).**EXERCISE****Directions (Q. 1 to Q.22) :** Find the missing number in each of the following :

- 6, 8, 12, 18, 26, ?, 48, 62  
(1) 44 (2) 74 (3) 36 (4) 52
- 3, 6, 12, 21, 33, ?, 66, 87  
(1) 54 (2) 12 (3) 33 (4) 48
- 150, 141, 133, 126, ?, 115, 111, 108  
(1) 120 (2) 124 (3) 118 (4) 7
- 7, 13, 24, 45, 86, ?, 328, 649  
(1) 131 (2) 41 (3) 167 (4) 242
- 250, 184, 129, ?, 52, 30  
(1) 313 (2) 55 (3) 85 (4) 100
- 4, 16, 8, 12, 12, 8, 16, ?, 20, 0  
(1) 24 (2) 4 (3) 8 (4) 18
- 3, 24, 8, 7, 35, 5, 9, 63, 7, 2, ?, 8  
(1) 9 (2) 16 (3) 5 (4) 6
- 4, 14, 24, 34, 44, ?, 64, 74  
(1) 78 (2) 10 (3) 54 (4) 20
- 7, 20, 59, 176, ?, 580, 4739  
(1) 527 (2) 235 (3) 1404 (4) 117

10. 4, 10, 22, 40,?, 94, 130  
 (1) 64 (2) 62 (3) 18 (4) 84
11. 8, 9, 8, 7, 10, 9, 6, 11, 10,?, 12  
 (1) 11 (2) 17 (3) 7 (4) 5
12. 2, 5, 12, 23, 38, 57,?  
 (1) 69 (2) 76 (3) 80 (4) 84
13. 240,?, 120, 40, 10, 2  
 (1) 480 (2) 240 (3) 220 (4) 120
14. 5, 16, 51, 158,?  
 (1) 1452 (2) 483 (3) 481 (4) 1454
15. 1, 2, 5, 12, 27, 58,?  
 (1) 121 (2) 136 (3) 135 (4) 174
16. 2, 4, 7, 11, 16,?  
 (1) 18 (2) 20 (3) 22 (4) 25
17. 120, 99, 80, 63, 48,?  
 (1) 35 (2) 38 (3) 39 (4) 40
18. 0, 2, 8, 14,?, 34  
 (1) 20 (2) 23 (3) 24 (4) 25
19. 125, 80, 45, 20,?  
 (1) 5 (2) 8 (3) 10 (4) 12
20. 325, 259, 204, 160, 127, 105,?  
 (1) 94 (2) 96 (3) 98 (4) 100
21. 0.5, 0.55, 0.65, 0.8,?  
 (1) 0.9 (2) 0.82 (3) 1 (4) 0.95
22. 1, 1, 4, 8, 9, 27, 16,?  
 (1) 32 (2) 64 (3) 81 (4) 256

**Directions (Q.23 to Q.28) :** In each of the following question one term in the number series is wrong. Find out the wrong term.

23. 36, 35, 32, 27, 20, 10, 0  
 (1) 10 (2) 20 (3) 27 (4) 32
24. 112, 114, 120, 124, 132, 142, 154  
 (1) 114 (2) 120 (3) 124 (4) 132
25. 7, 9, 17, 42, 91, 172, 293  
 (1) 9 (2) 17 (3) 42 (4) 91
26. 4, 10, 22, 40, 74, 94, 130  
 (1) 22 (2) 40 (3) 74 (4) 94
27. 3, 10, 30, 66, 127, 218  
 (1) 3 (2) 66 (3) 30 (4) 218
28. 5, 11, 23, 45, 95, 191, 383  
 (1) 23 (2) 45 (3) 95 (4) 191



## BRAIN TEASERS

**Direction (Q.29 & Q.30) :** Find the missing number in each of the following :

29. 4, 8, 24, 88,?, 1368

(1) 344

(2) 112

(3) 64

(4) 500

30. 691, 522, 652, 982, 423,?

(1) 163

(2) 631

(3) 136

(4) 613

**Direction (Q.31 to Q.33) :** In each of the following question one term in the number series is wrong. Find out the wrong term.

31. 0, 1, 3, 6, 10, 15, 21, 28, 37, 45

(1) 0

(2) 10

(3) 45

(4) 37

32. 10, 41, 94, 2024, 2516, 3625, 4936

(1) 2024

(2) 2516

(3) 3625

(4) 4936

33. 2, 4, 12, 46, 240

(1) 2

(2) 4

(3) 46

(4) 240

**Direction (Q.34 & Q.35):** In each of the following questions, a number series is given. After the series, a number is given followed by (A), (B), (C), (D) and (E). You have to complete the series starting with the number on the pattern of the sequence of the given series. Then, answer the given questions.

34. 80, 50, 130, 100, 180, 150, 230

900, (A) (B) (C) (D) (E)

Which number will come in place of (C)?

(1) 1050

(2) 920

(3) 1000

(4) 950

35. 4, 14, 42, 147, 588, 2058, 10290

8, (A) (B) (C) (D) (E)

Which number will come in place of (C)?

(1) 28

(2) 1176

(3) 294

(4) 216

## ANSWERS

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	3	4	1	3	3	2	2	3	1	1
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	4	3	2	3	1	3	1	3	1	1
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	3	2	1	2	1	3	3	2	1	1
Que.	31	32	33	34	35					
Ans.	4	1	3	2	3					

In this type of questions, a series of single, pairs or groups of letters or combinations of letters and numerals is given. The terms of the series form a certain pattern as regards the position of the letters in the English alphabet. The candidate is required to decipher this pattern and accordingly find the missing term or the wrong term in the given series.

### Solved Examples

**Ex.1** Find the next two terms in the series: A, C, F, J, ?, ?

- (1) L, P                      (2) M, O                      (3) O, U                      (4) R, V

**Sol.** Clearly, the first, second, third, ..... letters of the series are respectively moved two, three, four, ..... steps forward to obtain the successive terms of the series.

Thus, the fifth term in the series must be a letter which is five steps ahead of J i.e. O, while the sixth term must be a letter six steps ahead of O i.e. U.

Thus, we have the following pattern :

$$A \xrightarrow{+2} C \xrightarrow{+3} F \xrightarrow{+4} J \xrightarrow{+5} O \xrightarrow{+6} U$$

So, the missing terms are O and U. Hence, the answer is (3).

**Ex.2** Which term comes next in the sequence: AC, FH, KM, PR, ?

- (1) UW                      (2) VW                      (3) UX                      (4) TV

**Sol.** Clearly, the first and second letters of each term are moved five steps forward to obtain the corresponding letters of the next term.

Thus, the first letter of the missing term must be five steps ahead of P i.e. U, while the second letter must be five steps ahead of R i.e. W.

So, the missing term is UW. Hence, the answer is (1).

**Ex.3** Find the next term in the series : BMO, EOQ, HQS, ?

- (1) KSU                      (2) LMN                      (3) SOV                      (4) SOW

**Sol.** Clearly, we observe the following pattern :

$$\text{The first letters follow the pattern } +3 \text{ i.e. } B \xrightarrow{+3} E \xrightarrow{+3} H \xrightarrow{+3} \textcircled{K}$$

$$\text{The second letters follow the pattern } +2 \text{ i.e. } M \xrightarrow{+2} O \xrightarrow{+2} Q \xrightarrow{+2} \textcircled{S}$$

$$\text{The third letters follow the pattern } +2 \text{ i.e. } O \xrightarrow{+2} Q \xrightarrow{+2} S \xrightarrow{+2} \textcircled{U}$$

Thus, the missing term is KSU. Hence, the answer is (1).

**Ex.4** Which term comes next in the series: YEB, WFD, UHG, SKI, ?

- (1) QOL                      (2) QGL                      (3) TOL                      (4) QNL

**Sol.** Clearly, we observe the following pattern in the first, second and third letters of the given series:

$$\text{1st letter : } Y \xrightarrow{-2} W \xrightarrow{-2} U \xrightarrow{-2} S \xrightarrow{-2} \textcircled{Q}$$

$$\text{2nd letter : } E \xrightarrow{+1} F \xrightarrow{+2} H \xrightarrow{+3} K \xrightarrow{+4} \textcircled{O}$$

$$\text{3rd letter : } B \xrightarrow{+2} D \xrightarrow{+3} G \xrightarrow{+2} I \xrightarrow{+3} \textcircled{L}$$

Thus, the missing term is QOL. Hence, the answer is (1).

**Ex.5** Which term will replace the question mark in the series:

ABD, DGK, HMS, MTB, SBL, ?

(1) ZKU

(2) ZKW

(3) ZAB

(4) XKW

**Sol.** Clearly, the individual letters of the terms of the given series follow the pattern shown below:

1st letter : A  $\xrightarrow{+3}$  D  $\xrightarrow{+4}$  H  $\xrightarrow{+5}$  M  $\xrightarrow{+6}$  S  $\xrightarrow{+7}$  (Z)

2nd letter : B  $\xrightarrow{+5}$  G  $\xrightarrow{+6}$  M  $\xrightarrow{+7}$  T  $\xrightarrow{+8}$  B  $\xrightarrow{+9}$  (K)

3rd letter : D  $\xrightarrow{+7}$  K  $\xrightarrow{+8}$  S  $\xrightarrow{+9}$  B  $\xrightarrow{+10}$  L  $\xrightarrow{+11}$  (W)

Thus, the missing term is ZKW. Hence, the answer is (2).

## EXERCISE

**Direction (Q.1 to Q.30) :** Find the missing term in each of the following.

1. BEH, ILO, PSV, ?

(1) WAZ

(2) WZA

(3) WZB

(4) XZA

2. GKO, RVZ, CGK, ?

(1) NRV

(2) MUV

(3) NZM

(4) MYQ

3. QYK, ?, ISG, EPE.

(1) NWJ

(2) MVI

(3) NVI

(4) MVJ

4. U, T, R, O, K, ?

(1) F

(2) G

(3) H

(4) I

5. COD, BOE, AOF, ?

(1) XOF

(2) ZOB

(3) ZOG

(4) ZOH

6. A, D, H, M, ?, Z

(1) T

(2) G

(3) N

(4) S

7. Z, U, Q, ?, L

(1) I

(2) K

(3) M

(4) N

8. Z, Y, X, U, T, S, P, O, N, K, ?, ?

(1) H, G

(2) H, I

(3) I, H

(4) J, I

9. A, B, B, D, C, F, D, H, E, ?, ?

(1) E, F

(2) F, G

(3) F, I

(4) J, F

10. Z, S, W, O, T, K, Q, G, ?, ?

(1) N, C

(2) N, D

(3) O, C

(4) O, D

11. AB, DEF, HIJK, ?, STUVWX

(1) LMNO

(2) LMNOP

(3) MNOPQ

(4) QRSTU

12. GH, JL, NQ, SW, YD, ?

(1) EJ

(2) FJ

(3) EL

(4) FL

13. AI, BJ, CK, ?

(1) DL

(2) DM

(3) GH

(4) LM



14. ajs, gpy,?, sbk, yhq  
(1) dmv (2) mve (3) oua (4) qzi
15. PMT, OOS, NQR, MSQ,?  
(1) LUP (2) LVP (3) LVR (4) LWP
16. A, G, L, P, S,?  
(1) U (2) W (3) X (4) Y
17. H, I, K, N,?  
(1) O (2) Q (3) R (4) S
18. A, I, P, V, A, E,?  
(1) E (2) F (3) G (4) H
19. AZ, GT, MN,?, YB  
(1) JH (2) SH (3) SK (4) TS
20. Y, B, T, G, O,?  
(1) N (2) M (3) L (4) K
21. AZ, CX, FU,?  
(1) IR (2) IV (3) JQ (4) KP
22. DF, GJ, KM, NQ, RT,?  
(1) UW (2) YZ (3) XZ (4) UX
23. Y, W, T, P, K, E, X,?,?  
(1) G,H (2) P,G (3) R,G (4) S, R
24. C, Z, F, X, I, V, L, T, O,?,?  
(1) O,P (2) P,Q (3) R, R (4) S, R
25. U, B, I, P, W,?  
(1) D (2) F (3) Q (4) Z



**BRAIN TEASERS**

26. BWDV, FUHT, JSLR,?  
(1) MPQQ (2) NQPP (3) HQFN (4) ABCD
27. Z,?, T,?, N,?, H,?, B  
(1) W, Q, K, E (2) W, R, K, E (3) X, Q, K, E (4) X, R, K, E
28. Z, X, S, I, R, R,?,?  
(1) G, I (2) J, I (3) J, K (4) K, M
29. a, d, c, f,?, h, g,?, i  
(1) e, j (2) e, k (3) f, j (4) j, e
30. R, U, X, A, D,?  
(1) F (2) G (3) H (4) I

**ANSWERS**

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	2	1	2	1	3	4	4	4	4	1
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	3	4	1	2	1	1	3	4	2	3
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	3	4	2	3	1	2	1	1	1	2

## 1.3

## Alpha-numeric series

This type of questions is just a jumbled form of questions of Type I and Type II, which you have just read. Here, the terms of the given series are a combination of letters and numerals, which move according to a set pattern.

Study the following examples:

## Solved Examples

**Ex.1** Find the next term in the alpha-numeric series :

Z1A, X2D, V6G, T21J, R88M, P445P, ?

(1) N2676S

(2) N2676T

(3) T2670N

(4) T2676N

**Sol.** Clearly, the patterns followed by the letters are as follows:

1st letter : Z  $\xrightarrow{-2}$  X  $\xrightarrow{-2}$  V  $\xrightarrow{-2}$  T  $\xrightarrow{-2}$  R  $\xrightarrow{-2}$  P  $\xrightarrow{-2}$  (N)

2nd letter: A  $\xrightarrow{+3}$  D  $\xrightarrow{+3}$  G  $\xrightarrow{+3}$  J  $\xrightarrow{+3}$  M  $\xrightarrow{+3}$  P  $\xrightarrow{+3}$  (S)

The series formed by the numerals i.e. 1, 2, 6, 21, 88, 445, ..... follows the pattern  $\times 1 + 1$ ,  $\times 2 + 2$ ,  $\times 3 + 3$ ,  $\times 4 + 4$ ,  $\times 5 + 5$ , .....

So, numeral in the desired term =  $445 \times 6 + 6 = 2676$ .

Hence, desired term is N2676S.

Hence, the answer is (1).

**Ex.2** Find the term which does not fit into the series given below :

G4T, J10R, M20P, P43N, S90L

(1) G4T

(2) J10R

(3) M20P

(4) P43N

**Sol.** The patterns followed by the letters are:

1st letter : G  $\xrightarrow{+3}$  J  $\xrightarrow{+3}$  M  $\xrightarrow{+3}$  P  $\xrightarrow{+3}$  S

3rd letter : T  $\xrightarrow{-2}$  R  $\xrightarrow{-2}$  P  $\xrightarrow{-2}$  N  $\xrightarrow{-2}$  L

The number-series 4, 10, 20, 43, 90 should follow the pattern  $\times 2 + 1$ ,  $\times 2 + 2$ ,  $\times 2 + 3$ ,  $\times 2 + 4$ .

So, 10 is wrong and must be replaced by  $(4 \times 2 + 1)$  i.e. 9.

Thus, the term J10R does not fit in the given series. The correct term is J9R. Hence, the answer is (2).

## EXERCISE

**Direction (Q.1 to Q.13) :** Find the next term of each of following alpha-numeric series.

1. J2Z, K4X, L7V, ? N16R, O22P

(1) I11T

(2) P11S

(3) P11T

(4) M11T

2. W-144, ?, S-100, Q-81, O-64

(1) U-121

(2) U-122

(3) V-121

(4) V-128

3. DQ2, ER3, FS5, ?, HU11

(1) GT7

(2) FT7

(3) HR9

(4) FR9

4. C12, F9, I6, ?, O0

(1) K4

(2) L3

(3) J5

(4) M7

5. B3C, C4E, E6H, H9L, ?

(1) K12M

(2) K13O

(3) K13N

(4) L13Q

6. S97, V100, Y105, B112, E123, ?

(1) I34

(2) J135

(3) H136

(4) D137

7. B0R, E3U, G9Y, J18D, ?

(1) I27J

(2) I27H

(3) L30J

(4) L30H



8. D-4, F-6, H-8, J-10,?,?  
 (1) K-12, M-13 (2) L-12, M-14 (3) L-12, N-14 (4) K-12, M-14
9. 2B, 4C, 8E, 14H,?  
 (1) 16K (2) 20I (3) 20L (4) 22L
10. 3F, 6G, 11I, 18L,?  
 (1) 21O (2) 25N (3) 25P (4) 27P
11. KM5, IP8, GS11, EV14,?  
 (1) BX17 (2) BY17 (3) CY17 (4) CY18
12. C4X, F9U, I16R,?  
 (1) K25P (2) L25P (3) L25O (4) L27P
13. N5V, K7T,?, E14P, B19N  
 (1) H9R (2) H10Q (3) H10R (4) I10R

**Directions (Q.14 & Q.15) :** In each of the following question one term in the number series is wrong. Find out the wrong term.

14. A8, B5, D2, H1, P  $\frac{1}{2}$   
 (1) D2 (2) B5 (3) A8 (4) H 1
15. 800A, 675E, 525I, 350N, 150Q  
 (1) 350N (2) 675E (3) 525I (4) 150Q
- Direction (Q.16 & Q.17) :** Find the next term of each of following alpha-numeric series.
16. A3P, C5N, E8K, G12G,?  
 (1) I16D (2) I17B (3) I17D (4) J16B
17. 3E, 6F, 11H, 18K,?  
 (1) 21Q (2) 25N (3) 27Q (4) 27Q



**BRAIN TEASERS**

**Directions (Q.18 & Q.19) :** Find the missing term (?)

18. 2Z5, 7Y7, 14X9, 23W11, 34V13,?  
 (1) 27U24 (2) 45U15 (3) 47U15 (4) 47V14
19. Q1F, S2E, U6D, W21C,?  
 (1) Y44B (2) Y66B (3) Y88B (4) Z88B
20. Find out the wrong term.  
 RL12, TQ20, VU30, AX48, FZ68, LA92  
 (1) VU30 (2) TQ20 (3) AX48 (4) FZ68

**ANSWERS**

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	4	1	1	2	4	3	3	3	4	4
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	3	3	3	2	1	2	3	3	3	1

## 1.4

## Continuous pattern series

This type of questions usually consists of a series of small letters which follow a certain pattern. However, some letters are missing from the series. These missing letters are then given in a proper sequence as one of the alternatives. The candidate is required to choose this alternative as the answer.

## Solved Examples

**Ex.** aab \_ aaa \_ bba \_

(1) baa

(2) abb

(3) bab

(4) aab

**Sol.** We proceed step by step as shown below:

1. The first blank space should be filled in by 'b' so that we have two a's followed by two b's.
2. The second blank space should be filled in either by 'a' so that we have four a's followed by two b's, or 'b' So that we have three a's followed by three b's.
3. The last space must be filled in by 'a'.
4. Thus, we have two possible answers: 'baa' and 'bba'. But, only 'baa' appears in the alternatives. Hence, the answer is (1).
5. In case, we had both the possible answers in the alternatives, we would have chosen the one that forms a more prominent pattern, which is aabb/aaabbb/aa. Thus, our answer would have been 'bba'.

## EXERCISE

**Directions (Q.1 to Q.25) :** In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative.

1. M \_ NM \_ NNMMN \_ M  
(1) MMN (2) NNM (3) NMN (4) MNM
2. x \_ yz \_ yzxyy \_  
(1) xxy (2) yzz (3) yxz (4) yyx
3. x \_ yzy \_ zy \_ yzyx \_ y  
(1) yxxz (2) yyyz (3) xxxz (4) xyxz
4. CD \_ DCD \_ DC \_ DD  
(1) CCC (2) CDD (3) DDD (4) DDC
5. AAA \_ AA \_ BA \_ BB  
(1) BBB (2) AAA (3) ABB (4) BAA
6. aa \_ paa \_ bo \_ a \_ abo \_ aa  
(1) bopbop (2) bopbpp (3) booppb (4) boapap
7. \_ \_ aba \_ \_ ba \_ ab  
(1) abbba (2) abbab (3) baabb (4) bbaba
8. ab \_ \_ baa \_ \_ ab \_  
(1) aaaaa (2) aabaa (3) aabab (4) baabb
9. m \_ nm \_ n \_ an \_ a \_ ma \_  
(1) aamnan (2) ammanm (3) aammnn (4) amammn
10. a \_ ba \_ b \_ b \_ a \_ b  
(1) abaab (2) abbab (3) aabba (4) bbabb

11. \_ stt \_ tt \_ tts \_  
 (1) tsts (2) ttst (3) sstt (4) tsst
12. \_ op \_ mo \_ n \_ \_ pnmop \_  
 (1) mnpmon (2) mpnmop (3) mnompn (4) mnpomn
13. \_ nmmn \_ mmnn \_ mnnm \_  
 (1) nmmn (2) mnnm (3) nnmm (4) nmnm
14. \_ tu \_ rt \_ s \_ \_ usrtu \_  
 (1) rtusru (2) rsutrr (3) rsurtr (4) rsurts
15. ba \_ cb \_ b \_ bab \_  
 (1) acbb (2) bacc (3) bcaa (4) cabb
16. bca \_ b \_ aabc \_ a \_ caa  
 (1) acab (2) bcbb (3) cbab (4) ccab
17. ab \_ d \_ aaba \_ na \_ badna \_ b  
 (1) andaa (2) babda (3) badna (4) dbanb
18. gfe \_ ig \_ eii \_ fei \_ gf \_ ii  
 (1) eifgi (2) figie (3) ifgie (4) ifige
19. c \_ bbb \_ \_ abbbb \_ abbb \_  
 (1) aabcb (2) abccb (3) abacb (4) bacbb
20. c \_ bba \_ cab \_ ac \_ ab \_ ac  
 (1) abcbc (2) acbcb (3) babcc (4) bcacb



**BRAIN TEASERS**

21. \_ aa \_ ba \_ bb \_ ab \_ aab  
 (1) aaabb (2) babab (3) bbaab (4) bbbaa
22. a \_ n \_ b \_ \_ ncb \_ \_ ncb  
 (1) abbbcc (2) abcbcb (3) bacbab (4) bcabab
23. a \_ bbc \_ aab \_ cca \_ bbcc  
 (1) bacb (2) acba (3) abba (4) caba
24. cccbb \_ aa \_ cc \_ bbbaa \_ c  
 (1) acbc (2) baca (3) baba (4) acba
25. \_ a \_ b \_ abaa \_ bab \_ abb  
 (1) aaabb (2) ababb (3) babab (4) babba

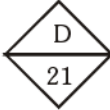
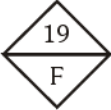
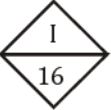
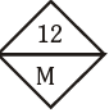

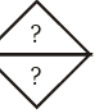






**ANSWERS**

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	3	3	1	3	1	4	2	2	3	4
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	4	1	3	4	2	1	1	3	2	2
Que.	21	22	23	24	25					
Ans.	3	4	2	2	4					

## EXERCISE

## QUESTIONS RELATED TO VARIOUS OLYMPIADS

Direction (Q.1 to Q.8) : Find the missing terms (?)

1.      
- (1)  $\frac{S}{10}$  (2)  $\frac{3}{X}$  (3)  $\frac{U}{4}$  (4)  $\frac{1}{X}$
2.      
- (1)  $\frac{6}{U}$  (2)  $\frac{13}{P}$  (3)  $\frac{18}{P}$  (4)  $\frac{W}{4}$
3. 2520, 360, 60, 12, ?  
(1) 13 (2) 3 (3) 14 (4) 18
4. 13, 14, 18, 27, 43, ?  
(1) 45 (2) 62 (3) 68 (4) 51
5. 5, 6, 7, 8, 10, 11, 14, ?  
(1) 15 (2) 16 (3) 17 (4) 18
6. 10, 19, 40, 77, 158, ?  
(1) 311 (2) 307 (3) 301 (4) 299
7. ZUA, XOC, VIE, TCG, ?  
(1) RAI (2) SAG (3) RAG (4) RWI
8. 11, 10, ?, 100, 1001, 1000, 10001  
(1) 101 (2) 110 (3) 111 (4) 1101
9. Which of the options will come next in the series?  
JAZ, LEX, NIV, POT, ?  
(1) QUR (2) RUS (3) RUR (4) RSR
10. Find the next term in the series : BMO, EOQ, HQS, ?  
(1) KSU (2) LMN (3) SOV (4) SOW

## ANSWERS

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	4	1	2	3	1	1	4	1	3	1